



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,326	11/12/2003	Thomas E. Sharon	06935.105040	6476

7590

10/06/2005

Steven P. Wigmore, Esq.
KING & SPALDING LLP
45th Floor
191 Peachtree Street, N.E.
Atlanta, GA 30303

EXAMINER

GANTT, ALAN T

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,326

Applicant(s)

SHARON ET AL.

Examiner

Alan T. Gantt

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>111203</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Reichman et al.

(US 6,240,073)

Regarding claim 12, Reichman discloses a reverse link for a satellite communication network and is suitable for networks used for Internet access purposes. Reichman includes a user terminal for communicating information with other user terminals through a satellite communications system, the satellite communications system including a communications satellite in geosynchronous orbit and a plurality of hubs, the communications satellite including an antenna, each hub located in one of a plurality of spot coverage areas formed by the antenna (col. 4, lines 66 to col. 5, line 17 – the hub being located in a spot coverage area is inherent if communication is achieved), the user terminal being adapted to:

transmit information to one of the hubs via the communications satellite according to a first protocol; (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18 – user can send information in either one of two types) and

receive information from the hub via the communications satellite according to a second protocol. (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18 – user can receive information in either one of two types)

Regarding claim 13, Reichman meets the limitation - The user terminal according to claim 12 wherein the user terminal is located in the spot coverage area in which the hub is located. (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18)

Regarding claim 14, Reichman meets the limitation - The user terminal according to claim 12 wherein the user terminal is located in one of the spot coverage areas other than the one in which the hub is located. (col. 8, line 56 to col. 9, line 7 –since the hub connects terrestrially to an external communication network, then the user need not be in the same spot coverage area

Regarding claim 15, Reichman meets the limitation - The user terminal according to claim 12 wherein the first protocol and the second protocol are the same protocol. (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18 - Reichman allows for two options in transmitting and receiving by the user terminal so that both incoming and outgoing protocols can be the same)

Regarding claim 16, Reichman discloses a reverse link for a satellite communication network and is suitable for networks used for Internet access purposes. Reichman includes a

Art Unit: 2684

method for communicating between user terminals through hubs, the user terminals being located in spot coverage areas defined by a spot beam antenna on a geosynchronous communications satellite, each of the hubs located in a respective spot coverage area, the method comprising the steps of:

transmitting a first signal from a first user terminal to a hub through the satellite according to a first protocol; (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18 – user can send information in either one of two types) and

receiving a second signal at a second user terminal from the first hub through the satellite according to a second protocol. (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18 – user can receive information in either one of two types)

Regarding claim 17, Reichman meets the limitation - The user terminal communicating method according to claim 16 further comprising the steps of: at the hub, transmitting the second signal at a selected frequency and a selected polarization to the satellite; and at the satellite, routing the second signal to at least one of the spot coverage areas based on the frequency and polarization of the second signal (inherent in satellite communications).

Regarding claim 18, Reichman meets the limitation - The user terminal communicating method according to claim 16 wherein the first signal transmitting step comprises transmitting the first signal from the first user terminal through the satellite to a first hub located in a

Art Unit: 2684

different spot coverage area. (col. 8, line 56 to col. 9, line 7 –since the hub connects terrestrially to an external communication network, then the user need not be in the same spot coverage area

Regarding claim 19, Reichman meets the limitation - The user terminal communicating method according to claim 16 further comprising the step of receiving the second signal at a third user terminal, wherein the second user terminal and the third user terminal are located in different spot coverage areas. . (col. 8, line 56 to col. 9, line 7 –since the hub connects terrestrially to an external communication network, then the user need not be in the same spot coverage area

Regarding claim 20, Reichman meets the limitation - The user terminal communicating method according to claim 16 further comprising the step of receiving the second signal at user terminals located within each of the spot coverage areas. (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18)

Regarding claim 21, Reichman meets the limitation - The user terminal communicating method according to claim 16 further comprising the step of receiving the second signal at a third user terminal, wherein the first, second, and third user terminals are located in the same spot coverage area. (col. 4, lines 66 to col. 5, line 17 and col. 5, line 65 to col. 6, line 18)

Art Unit: 2684

Regarding claim 22, Reichman meets the limitation - The user terminal communicating method according to claim 16 further comprising the step of communicating between at least two of the hubs through a ground-based communications link. (col. 4, lines 66 to col. 5, line 17 – Reichman allows for multiple hubs)

Regarding claim 23, Reichman meets the limitation - The user terminal communicating method according to claim 22 wherein the communicating step comprises communicating over a wide area network. (col. 8, line 56 to col. 9, line 7 –the hub connects terrestrially to an external communication network which is a wide area network)

Regarding claim 24, Rosen meets the limitation - The user terminal communicating method according to claim 16 further comprising the step of assigning, in a network operations control center, frequencies and polarizations to the hubs and user terminals. (Inherent task of a network operations control center)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (US 2002/0080066), in view of Glynn (US 5,552,920)

Regarding claim 25, Dent discloses a transmitter for simultaneously transmitting a plurality of signals in a plurality of directive beams to corresponding destination stations, each destination station located in a separate fan area. Dent discloses a router circuit for use in a satellite communications system, the satellite communications system comprising a ground hub; a communications satellite; and a plurality of user terminals located in a plurality of spot coverage areas, Dent meets the limitation:

a router adapted to route each of the inter-beam signal and the intra-beam signals to respective spot beam antennas on the satellite. (col.2, lines 44-62)

Glynn teaches separating inter-beam and intra-beams and meets the limitations:

a first demultiplexer for separating an inter-beam signal from a plurality of intra-beam signals; (col. 9, lines 9-39)

a second demultiplexer for separating the intra-beam signals; (col. 9, lines 9-39)

Dent and Glynn are combinable because they share a common endeavor, namely, steering satellite beam to a desired area. At the time of the applicant's invention it would have been obvious to modify Dent to include demultiplexing means as done by Glynn in order to have an alternate means of directing beams.

Regarding claim 26, Glynn meets the limitation - The frequency-based router circuit of claim 25 further comprising a plurality of downconverters for frequency converting respective

Art Unit: 2684

inter-beam and intra-beam signals. (col. 9, lines 9-39 -the use of downconverters for separating signals is well known)

Regarding claim 26, Glynn meets the limitation - The frequency-based router circuit of claim 25 further comprising a power adjust circuit for setting the output power level of a selected at least one of the inter-beam signal and the intra-beam signals. (the use of power control circuitry for adjusting output power levels is well known)

Allowable Subject Matter

Claims 1-11 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, this application is a divisional of 09/576,475, which is now US Patent 6,704,543. Said patent has allowed a somewhat broader claim of this system. Claim 1 adds to the already patented system hubs that received a first protocol and transmit a second protocol. For the reasoning of narrowing of the claim, the claim is allowed.

Conclusion

Any inquiry concerning this communication from the examiner should be addressed to Alan Gantt at telephone number (571) 272-7878. The examiner can normally be reached between 9:30 AM and 6 PM within the Eastern Time Zone. The group FAX number is (571) 273-8300.

Art Unit: 2684

Any inquiry of a general nature or relating to this application should be directed to
Supervisory Patent Examiner Nay Maung at telephone number (571) 272-7882.

Alan T. Gantt

Alan T. Gantt

September 30, 2005

Jemica M. Beamer

TEMICA BEAMER
PRIMARY EXAMINER